motion compensation unit **330** stabilizes the fluctuated images **12**, **13** and **14** and outputs the stabilized images to the screen **11**.

[0052] As described above, the digital image stabilizing apparatus according to the present invention does not have a complicated hardware construction because the global motion vector is detected using the additional information extracted by the encoded bit stream. Therefore, the digital image stabilizing apparatus according to the present invention is well adapted to correct the fluctuated images in the mobile image communication system such as a next generation mobile phone system or a mobile multimedia terminal which require a low transmission rate.

[0053] As the present invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, it should also be understood that the above-described embodiments are not limited by any of the details of the foregoing description, unless otherwise specified, but rather should be construed broadly within its spirit and scope as defined in the appended claims, and therefore all changes and modifications that fall within the meets and bounds of the claims, or equivalences of such meets and bounds are therefore intended to be embraced by the appended claims.

What is claimed is:

1. A video decoder having a digital image stabilization function, the decoder comprising:

a VLD for separating an image information and an additional information from an encoded bit stream;

a global motion computation unit for computing a global motion vector using a local motion vector with respect to a background region in an additional information from the VLD;

a time-based integration unit for receiving a global motion vector from the global motion computation unit and time-integrating the global motion vector based on a frame type; and

a global motion compensation unit for stabilizing a recovery image using a global motion vector integrated by the time-based integration unit.

2. The decoder of claim 1, wherein said global motion computation unit extracts a motion vector of the macro block unit from the additional information and detects a global motion vector.

3. The decoder of claim 2, wherein said global motion computation unit includes:

a local motion vector detector for receiving an additional information from the VLD and extracting the local motion vectors by the macro block unit;

a motion separating processor for separating the local motion vectors extracted by the local motion vector detector and separating a local motion vector concerning the motion of the background region; and

a global motion vector detector for detecting one global motion vector based on the local motion vector of the background region separated by the motion separation processor.

4. The decoder of claim 3, wherein said motion separation processor includes:

a similar motion estimation unit for separating the local motion vectors extracted from the local motion vector detector into a certain number of clusters; and

a background motion selector for selecting a cluster which has a motion of the background region among the clusters separated by the similar motion estimation unit.

5. The decoder of claim 1, wherein said time-based integration unit includes:

a frame type extraction unit for extracting a frame type from the additional information from the VLD; and

a global motion vector integration unit for integrating the global motion vector based on the frame type extracted by the frame type extraction processor.

6. The decoder of claim 5, wherein said time-based integration unit directly integrates the global motion vector in the case that the frame type is "I" and "P" and integrates the global motion vector when correcting the B-frame in the case of B-frame.

7. A digital image stabilization method using a video decoder, comprising the steps of:

a separation step for receiving an encoded bit stream and separating into an image information and an additional information;

a computation step for computing a global motion vector using a local motion vector concerning the motion of a background region in the additional information separated in the separation step;

an integration step for receiving the computed global motion vector and times integrating the received global motion vector based on the frame type; and

a stabilization step for stabilizing a recovery image using the global motion vector integrated in the integration step.

8. The method of claim 7, wherein said computation step includes:

a first step for receiving the additional information and extracting the local motion vector based on the macro block unit;

a second step for separating the local motion vector extracted in the first step and separating the local motion vector concerning the motion of the background region; and

a third step for detecting one global motion vector based on the local motion vector of the background region separated in the second step.

9. The method of claim 8, wherein said second step comprises the steps of:

2a for separating the local motion vector extracted in the first step into a certain number of the clusters; and

2b for selecting a certain cluster which has a motion of the background region among the clusters separated in the step 2a.

10. The method of claim 7, wherein said integration step includes:

a first step for extracting a frame type from the additional information; and

a second step for integrating the global motion vector based on the frame type extracted in the first step.

11. The method of claim 10, wherein in said integration step, the global motion vector is directly integrated in the case that the frame type is "I" and "P", and the global motion vector is integrated when correcting the B-frame in the case of the B-frame.

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